

AMENDMENTS TO THE CLAIMS

Claims 1-70 (Previously cancelled without prejudice or disclaimer).

71. (Previously Presented) A system comprising:

(a) an optical reader including an imaging assembly, a display, a keyboard, an acoustic output device and a controller configured to capture image data and decode decodable bar code symbols therein, said optical reader further including a hand held housing encapsulating said imaging assembly and said controller, said hand held housing further supporting said display and said keyboard; and

(b) a host processor having an associated display spaced apart from said optical reader, wherein said hand held housing is adapted to be held in a human hand so that said optical reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is configured so that in a first mode said host processor sends to said optical reader a beeper control instruction, wherein said optical reader substantially on receipt of said beeper control instruction actuates said acoustic output device so that said acoustic output device emits a series of beeps without actuating said display;

(d) wherein said system is further configured so that in a second mode said host processor sends to said optical reader a display control instruction, wherein said optical reader substantially on receipt of said display control instruction causes a predetermined indicia to be displayed on said display without actuating said acoustic output device.

72. (Previously Presented) The system of claim 71, wherein said optical reader further includes a light source, and wherein said system is configured so that said host processor in a further mode sends to said optical reader a light source control instruction, said optical reader substantially on receipt of said light source instruction causes said light source to flash on and off.

73. (Previously Presented) The system of claim 71, wherein said acoustic output device is a speaker.

74. (Previously Presented) The system of claim 71, wherein said imaging assembly includes a two dimensional solid state image sensor.

75. (Previously Presented) The system of claim 71, wherein said display is provided by a liquid crystal display.

76. (Previously Presented) A method for attracting attention of an operator of a hand held optical reader, said hand held optical reader having an artificial light source directing light toward a target, an acoustic output device, a wireless communication link, a display, and being configured to decode decodable bar code symbols represented in captured images, said method comprising the steps of:

(a) configuring said hand held optical reader to wirelessly receive at least one component control instruction from a spaced apart host processor, said component control instruction being selected from the group consisting of a light source flashing component control instruction which when executed by said hand held optical reader results in artificial light from said artificial light source being directed toward a target of said optical reader without a frame of image data being captured, an acoustic output device component control instruction which when executed by said hand held optical reader causes said acoustic output device to emit a series of beeps without actuation of said display, and a display output component control instruction which when executed by said hand held optical reader results in a predetermined indicia being displayed on said display without actuation of said acoustic output device, wherein said configuring step includes the step of configuring said hand held optical reader to execute said at least one component control instruction to produce a user-perceivable result substantially on receipt of said component control instruction and wherein said hand held optical reader is disposed in a common local facility with a spaced apart host processor having an associated display; and

(b) wirelessly sending from said spaced apart host processor to said hand held optical reader at least one of said light source flashing component control instruction,

said acoustic output device component control instruction, and said display output component control instruction, whereby a user-perceivable result is produced by said hand held optical reader substantially on receipt of said at least one component control instruction so that attention of an operator of said hand held optical reader is attracted.

77. (Previously Presented) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said spaced apart host processor to said hand held optical reader.

78. (Previously Presented) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said spaced apart host processor to said hand held optical reader so that substantially on receipt of said light source flashing component control instruction, said hand held optical reader directs LED light toward a target of said hand held optical reader.

79. (Previously Presented) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said acoustic output component control instruction from said spaced apart host processor to said hand held optical reader.

80. (Previously Presented) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said display output component control instruction from said spaced apart host processor to said hand held optical reader.

81. (Previously Presented) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said spaced apart host processor to said hand held optical reader, and wirelessly sending said acoustic output component control instruction from said spaced apart host processor to said hand held optical reader.

82. (Previously Presented) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said light source flashing component control instruction from said spaced apart host processor to said hand held optical reader, and wirelessly sending said display output component control instruction from said spaced apart host processor to said hand held optical reader.

83. (Previously Presented) The method of claim 76, wherein said wirelessly sending step includes the step of wirelessly sending said acoustic output component control instruction from said spaced apart host processor to said hand held optical reader, and wirelessly sending said display output component control instruction from said spaced apart host processor to said hand held optical reader.

Claims 84-96 (Previously cancelled without prejudice or disclaimer).

97. (Previously Presented) The method of claim 76, wherein said method further includes the step of initiating said component control instruction by presenting at a location spaced apart from said hand held optical reader a user-input command to control said hand held optical reader.

98. (Currently Amended) A system comprising:

(a) an optical reader including an imaging assembly, a display, a keyboard, a wireless communication link, a light source, an acoustic output device and a controller configured to capture image data and decode decodable bar code symbols therein, said optical reader further including a hand held housing encapsulating said imaging assembly and said controller, said hand held housing further supporting said display and said keyboard; and

(b) a host processor spaced apart from said optical reader, wherein said hand held housing is adapted to be held in a human hand so that said optical reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is configured so that in a first mode said host processor wirelessly sends to said optical reader a beeper control instruction, wherein said optical

reader substantially on receipt of said beeper control instruction actuates said acoustic output device so that said acoustic output device emits a series of beeps;

(d) wherein said system is further configured so that in a second mode said host processor sends to said optical reader a display control instruction, wherein said optical reader substantially on receipt of said display control instruction causes indicia to be displayed on said display; and

(e) wherein said system is configured so that said host processor in a further mode sends to said optical reader a light source control instruction, said optical reader substantially on receipt of said light source instruction causes light from said light source being to be directed toward a target of said optical reader without causing actuation of said imaging assembly.

Claim 99 (Previously cancelled without prejudice or disclaimer).

100. (Previously Presented) The system of claim 98, wherein said acoustic output device is a speaker.

101. (Previously Presented) The system of claim 98, wherein said imaging assembly includes a two dimensional solid state image sensor.

102. (Previously Presented) The system of claim 98, wherein said system is configured so that said beeper control instruction sent by said host processor in said first mode is initiated by a user by presenting at a location spaced apart from said optical reader a command to control said optical reader.

103. (Previously Presented) The system of claim 98, wherein said system is configured so that said display control instruction sent by said host processor in said second mode is initiated by a user by presenting at a location spaced apart from said optical reader a command to control said optical reader.

104. (Previously Presented) A system comprising:

(a) a optical reader including an imaging assembly, a display, a keyboard, an acoustic output device and a controller configured to capture image data and decode decodable bar code symbols therein, said optical reader further including a hand held housing encapsulating said imaging assembly and said controller, said hand held housing further supporting said display and said keyboard; and

(b) a host processor having an associated display spaced apart from said optical reader and being disposed at a common local facility with said optical reader, wherein said hand held housing is adapted to be held in a human hand so that said optical reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is configured so that in a first mode said host processor sends to said optical reader a beeper control instruction that is initiated by a user by presenting at a location spaced apart from said optical reader a command to control said optical reader, wherein said optical reader substantially on receipt of said beeper control instruction actuates said acoustic output device so that said acoustic output device emits a series of beeps without actuating said display;

(d) wherein said system is further configured so that in a second mode said host processor sends to said optical reader a display control instruction, wherein said optical reader substantially on receipt of said display control instruction causes indicia to be displayed on said display without actuating said acoustic output device.

105. (Previously Presented) The system of claim 104, wherein said optical reader further includes a light source, and wherein said system is configured so that said host processor in a further mode sends to said optical reader a light source control instruction, said optical reader substantially on receipt of said light source control instruction causes said light source to flash on and off.

106. (Previously Presented) The system of claim 104, wherein said system is configured so that said display control instruction sent by said host processor in said second mode is initiated by a user by presenting at a location spaced apart from said optical reader a command to control said optical reader.

107. (Previously Presented) The system of claim 104, wherein said imaging assembly includes a two dimensional solid state image sensor.

108. (Previously Presented) The method of claim 76, wherein said method further includes the step of inputting a command using said host processor to initiate said at least one component control instruction.

109. (Previously Presented) The system of claim 98, wherein said system is configured so that said beeper control instruction sent by said host processor in said first mode is initiated by a user of said host processor.

110. (Previously Presented) The system of claim 98, wherein said system is configured so that said display control instruction sent by said host processor in said second mode is initiated by a user of said host processor.

111. (Previously Presented) The system of claim 104, wherein said system is configured so that said display control instruction sent by said host processor in said second mode is initiated by a user of said host processor.

112. (Previously Presented) A system comprising:

(a) an optical reader including an imaging assembly, a display, a keyboard, an acoustic output device and a controller configured to capture image data and decode decodable indicia therein, said optical reader further including a hand held housing encapsulating said imaging assembly and said controller, said hand held housing further supporting said display and said keyboard; and

(b) a host processor having an associated display spaced apart from said optical reader, wherein said hand held housing is adapted to be held in a human hand so that said optical reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is configured so that said host processor can send to said optical reader a beeper control instruction, wherein said optical reader substantially

on receipt of said beeper control instruction actuates said acoustic output device so that said acoustic output device emits a series of beeps without actuating said display;

(d) wherein said system is further configured so that said host processor can send to said optical reader a display control instruction, wherein said optical reader substantially on receipt of said display control instruction causes a predetermined indicia to be displayed on said display without actuating said acoustic output device.

113. (Previously Presented) The system of claim 112, wherein said optical reader further includes a light source, wherein said system is configured so that said host processor can send to said optical reader a light source control instruction, and wherein said optical reader substantially on receipt of said light source instruction causes said light source to flash on and off.

114. (Previously Presented) The system of claim 112, wherein said acoustic output device is a speaker.

115. (Previously Presented) The system of claim 112, wherein said imaging assembly includes a two dimensional solid state image sensor.

116. (Previously Presented) The system of claim 112, wherein said display is provided by a liquid crystal display.

117. (Currently Amended) A system comprising:

(a) an optical reader including an imaging assembly, a display, a keyboard, a wireless communication link, a light source, an acoustic output device and a controller configured to capture image data and decode decodable indicia therein, said optical reader further including a hand held housing encapsulating said imaging assembly and said controller, said hand held housing further supporting said display and said keyboard; and

(b) a host processor spaced apart from said optical reader, wherein said hand held housing is adapted to be held in a human hand so that said optical reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is configured so that said host processor can wirelessly send to said optical reader a beeper control instruction, wherein said optical reader substantially on receipt of said beeper control instruction actuates said acoustic output device so that said acoustic output device emits a series of beeps;

(d) wherein said system is further configured so that said host processor can send to said optical reader a display control instruction, wherein said optical reader substantially on receipt of said display control instruction causes indicia to be displayed on said display; and

(e) wherein said system is further configured so that said host processor can send to said optical reader a light source control instruction, said optical reader substantially on receipt of said light source control instruction causes light from said light source ~~being to be~~ directed toward a target of said optical reader without causing actuation of said imaging assembly.

118. (Previously Presented) The system of claim 117, wherein said acoustic output device is a speaker.

119. (Previously Presented) The system of claim 117, wherein said imaging assembly includes a two dimensional solid state image sensor.

120. (Previously Presented) The system of claim 117, wherein said system is configured so that said beeper control instruction that can be sent by said host processor and can be initiated by a user by presenting at a location spaced apart from said optical reader a command to control said optical reader.

121. (Previously Presented) The system of claim 117, wherein said system is configured so that said display control instruction that can be sent by said host processor can be initiated by a user by presenting at a location spaced apart from said optical reader a command to control said optical reader.

122. (Previously Presented) The system of claim 117, wherein said system is configured so that said beeper control instruction is transmitted from said host processor in response to a user input command input by a user of said host processor.

123. (Previously Presented) The system of claim 117, wherein said system is configured so that said display control instruction is transmitted from said host processor in response to a user input command input by a user of said host processor.

124. (Previously Presented) The system of claim 117, wherein said system is configured so that said light source control instruction is transmitted from said host processor in response to a user input command input by a user of said host processor.

125. (Previously Presented) A system comprising:

(a) an optical reader including an imaging assembly, a display, a keyboard, an acoustic output device and a controller configured to capture image data and decode decodable indicia therein, said optical reader further including a hand held housing encapsulating said imaging assembly and said controller, said hand held housing further supporting said display and said keyboard; and

(b) a host processor having an associated display spaced apart from said optical reader and being disposed at a common local facility with said optical reader, wherein said hand held housing is adapted to be held in a human hand so that said optical

reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is configured so that said host processor can send to said optical reader a beeper control instruction that is initiated by a user of said host processor, wherein said optical reader substantially on receipt of said beeper control instruction actuates said acoustic output device so that said acoustic output device emits a series of beeps without actuating said display;

(d) wherein said system is further configured so that said host processor can send to said optical reader a display control instruction, wherein said optical reader substantially on receipt of said display control instruction causes indicia to be displayed on said display without actuating said acoustic output device.

126. (Previously Presented) The system of claim 125, wherein said optical reader further includes a light source, and wherein said system is further configured so that said host processor can send to said optical reader a light source control instruction, and wherein said optical reader substantially on receipt of said light source control instruction can cause said light source to flash on and off.

127. (Previously Presented) The system of claim 125, wherein said system is configured so that said display control instruction sent by said host processor can be initiated by a user by presenting at a location spaced apart from said optical reader a command to control said optical reader.

128. (Previously Presented) The system of claim 125, wherein said imaging assembly includes a two dimensional solid state image sensor.

129. (Previously Presented) A method for attracting attention of an operator of a hand held optical reader, said method comprising the steps of:

(a) providing a hand held optical reader having an artificial light source for use in directing light toward a target, an acoustic output device, said hand held optical reader having a display and further being configured to decode decodable bar code symbols represented in captured image data,

(b) providing a spaced apart host processor spaced apart from said hand held optical reader, said spaced apart host processor being disposed in a common local facility with said hand held optical reader having a user interface including a display;

(c) configuring said hand held optical reader to receive at least one component control instruction from a spaced apart host processor, said component control instruction being selected from the group consisting of a light source component control instruction which when executed by said hand held optical reader results in light from said artificial light source being directed toward a target of said optical reader without a frame of image data being captured, and an acoustic output device component control instruction which when executed by said hand held optical reader causes said acoustic output device to be actuated without a frame of image data being captured, wherein said configuring step includes the step of configuring said hand held optical reader to execute said at least one component control instruction to produce a user-perceivable result substantially on receipt of said component control instruction; and

(d) wirelessly sending from said spaced apart host processor to said hand held optical reader at least one of said light source component control instruction, and said acoustic output device component control instruction, whereby a user-perceivable result is produced by said hand held optical reader substantially on receipt of said at least one component control instruction so that attention of an operator of said hand held optical reader is attracted.

130. (Previously Presented) The method of claim 129, wherein said user-perceivable result is said light source being flashed.

131. (Previously Presented) The method of claim 129, wherein said user-perceivable result is a series of beeps being emitted by said acoustic output device.

132. (Previously Presented) The method of claim 129, wherein said sending step includes the step of sending responsively to a command being input to said spaced apart host processor by a user of said host processor.

133. (Previously Presented) A method for signaling an alarm condition to an operator of a hand held optical reader, said method comprising the steps of:

(a) providing a hand held optical reader having an artificial light source for use in directing light toward a target, an acoustic output device, said hand held optical reader having a display and further being configured to decode decodable bar code symbols represented in captured image data,

(b) providing a spaced apart host processor spaced apart from said hand held optical reader, said spaced apart host processor being disposed in a common local facility with said hand held optical reader, said spaced apart host processor having a user interface including a display;

(c) configuring said hand held optical reader to receive at least one component control instruction from a spaced apart host processor, wherein said configuring step includes the step of configuring said hand held optical reader to receive a light source component control instruction and an acoustic output device component control instruction, wherein said light source component control instruction when executed by said hand held optical reader results in light from said artificial light source being directed toward a target of said optical reader without image data being captured and wherein said acoustic output device component control instruction when executed by said hand held optical reader causes said acoustic output device to be actuated without image data being captured, wherein said configuring step further includes the step of configuring said hand held optical reader to execute said at least one component control instruction to produce a user-perceivable result substantially on receipt of said component control instruction and wherein said hand held optical reader is further configured to receive a frame capture component control instruction and an image upload component control instruction, the frame capture component control instruction when executed by said hand held optical reader resulting in a frame of image data presently in a field of view of said hand held optical reader being captured, and the image upload component control instruction when executed by said hand held optical reader resulting in a last captured frame of image data being uploaded to said spaced apart host processor; and

(d) wirelessly sending from said spaced apart host processor to said hand held optical reader at least one of said light source component control instruction, and said

acoustic output device component control instruction, whereby a user-perceivable result is produced by said hand held optical reader substantially on receipt of said at least one component control instruction so that an alarm condition is indicated to an operator of said hand held optical reader.

134. (Previously Presented) The method of claim 133, wherein said user-perceivable result is said light source being flashed.

135. (Previously Presented) The method of claim 133, wherein said user-perceivable result is a series of beeps being emitted by said acoustic output device.

136. (Previously Presented) The method of claim 133, wherein said sending step includes the step of sending responsively to a command being input to said spaced apart host processor by a user of said host processor.

137. (Previously Presented) The system of claim 112, wherein said host processor is disposed in a common local facility with said optical reader, and wherein said host processor includes an associated communication interface for providing communication between said host processor and a processor not disposed in a common local facility with said host processor.

138. (Previously Presented) The system of claim 117, wherein said host processor is disposed in a common local facility with said optical reader, and wherein said host processor includes an associated communication interface for providing communication between said host processor and a processor not disposed in a common local facility with said host processor.

139. (Previously Presented) The system of claim 125, wherein said host processor includes an associated communication interface for providing communication between said host processor and a processor not disposed in a common local facility with said host processor.

140. (Previously Presented) The method of claim 129, wherein said providing step includes the step of providing said host processor so that said host processor includes an associated communication interface for providing communication between said host processor and a processor not disposed in a common local facility with said host processor.

141. (Previously Presented) The method of claim 133, wherein said providing step includes the step of providing said host processor so that said host processor includes an associated communication interface for providing communication between said host processor and a processor not disposed in a common local facility with said host processor.

142. (Previously Presented) A system for attracting attention of an operation of an optical reader, said system comprising:

(a) an optical reader including an imaging assembly, a display, a keyboard, a wireless communication link, an illumination assembly comprising at least one light source, said illumination assembly for directing light in a direction of a target object, said optical reader further having a controller configured to capture image data and decode decodable indicia therein, said optical reader further including a hand held housing encapsulating said imaging assembly, said controller and said illumination assembly, said hand held housing further supporting said display and said keyboard; and

(b) a host processor spaced apart from said optical reader and being disposed in a common local facility with said optical reader, wherein said host processor has an associated keyboard and an associated communication interface for providing communication with processor not disposed in said common local facility, wherein said hand held housing is adapted to be held in a human hand so that said optical reader is moveable between a variety of orientations and distances with respect to said host processor;

(c) wherein said system is further configured so that said host processor can send to said optical reader a light source control instruction,

(d) wherein said system is further configured so that said optical reader, substantially on receipt of said light source control instruction causes said illumination

assembly to direct light toward a target of said optical reader without causing actuation of said imaging assembly.

143. (Previously Presented) The system of claim 142, wherein said imaging assembly includes a two dimensional solid state image sensor.

144. (Previously Presented) The system of claim 142, wherein said system is configured so that said light source control instruction is transmitted from said host processor in response to a user input command input by a user of said host processor.

145. (Previously Presented) The system of claim 142, wherein said illumination assembly includes a plurality of light sources.

146. (Previously Presented) The system of claim 142, wherein said illumination assembly includes a plurality of LEDs.